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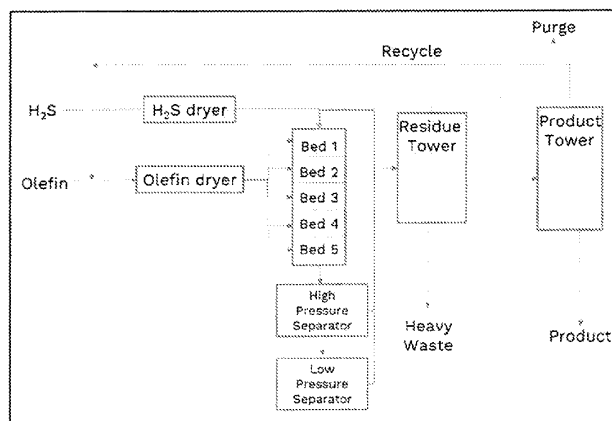
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(54) Title: INTEGRATED MANUFACTURING PROCESS FOR TERTIARY MERCAPTAN PRODUCTS

Figure 1



(57) Abstract: A continuous or semi-continuous process for producing a product mixture comprising tertiary and secondary mercaptans includes: reacting a first olefin stream including an asymmetric branched olefin/oligomer with a first sulfhydryl source stream in the presence of a catalyst to provide an intermediate stream comprising tertiary and secondary mercaptans; reacting a second olefin stream including a linear alpha-olefin with a second sulfhydryl source stream to provide a crude stream including linear and/or branched primary mercaptans and secondary mercaptans; separating the secondary mercaptans and optionally some or all of the linear and/or branched primary mercaptans from the crude stream to form a make-up stream; and combining at least a portion of the make-up stream with the intermediate stream to produce the product mixture including tertiary mercaptans, secondary mercaptans, and optionally linear and/or branched primary mercaptans. An apparatus to perform the process is also provided.

[Continued on next page]

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